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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/796,948	03/10/2004	Richard S. Withers	B0002/7055	4489

64967 7590 01/08/2007

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EXAMINER	
FETZNER, TIFFANY A	
ART UNIT	PAPER NUMBER
2859	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/08/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/796,948	WITHERS, RICHARD S.	
	Examiner	Art Unit	
	Tiffany A. Fetzner	2859	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *3/10/2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description:

A) **Figure 1** shows a **component 23** which is not referred to by applicant in the description or figure 1.

B) **The dashed box of figure 1 appears to have a reference number leder line, but not component number is provided**. Additionally the dashed box is not referenced in the specification. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities:

A) **Component 23** of **prior art figure 1** is not referred to in applicant's original disclosure. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. **Claims 1-11,** and **22-34** are rejected under **35 U.S.C. 102(b)** as being anticipated by **Marek** US patent application publication **2002/0190715 A1** published December 19th 2002, filed **April 10th 2002**.

5. With respect to magnetic resonance RF resonator **Claim 1**, and its corresponding method of making **claim 24**, **Marek** teaches and shows "A magnetic resonance radio frequency resonator" [See figures 10a, 10b, 11, and 12; the abstract, paragraphs [0002], [0035]] "that generates a radio frequency magnetic field in an active sample volume" [See the abstract, paragraphs [0002], [0035]], "the magnetic resonance radio frequency resonator comprising: a dielectric substrate" (i.e. components 1a, 1b, 1c, and 1d of the **Marek** figures.] "and a conductive material deposited on the dielectric substrate" [See the High temperature superconductive material, of paragraphs [0002], [0005], "and forming a plurality of nested current carrying loops" [See figures 10a, 10b, 11, 12] "each of which has magnetic field generating elements" (i.e. components 2d) "and interdigital capacitor elements" (i.e. components 3d), "the current carrying loops forming a substantially closed geometric path surrounding an inner region that lies adjacent to the active sample volume" [See the combination of figures 1 through 27 which shows the numerous orientations of how the individual resonators surround the active sample volume.] "wherein substantially all of the interdigital capacitor elements are oriented in a direction substantially parallel to the orientation of the magnetic field generating elements" [See the superconductive resonant circuits 2d, 3d of the **Marek** figures. See especially figures 10a, 10b, 11, and 12 along with the abstract, and the entire reference in general as the maintained parallel orientation of the magnetic field generating elements is the main feature of novelty taught by the **Marek** reference, throughout the **Marek** reference.]

6. With respect to magnetic resonance RF resonator **Claim 2**, and its corresponding method of making **claim 25**, **Marek** shows from figures 1 through 27, the abstract, and the written descriptions of these figures throughout the **Marek** reference that "the resonator is configured to be located in a static magnetic field in a particular orientation and, when in said particular orientation, the interdigital capacitor elements" (i.e. component 3d of figures 10a, 10b, 11, and 12) are oriented parallel to the static magnetic field". The same reasons for rejection, which apply to **claims 1, 24** also apply to **claims 2, 25** and need not be reiterated.

7. With respect to magnetic resonance RF resonator **Claim 3**, and its corresponding method of making **claim 26**, **Marek** teaches "the conductive material is a superconductor". [See the abstract, paragraphs [0002], [0005], and [0069] as examples of this teaching.] The same reasons for rejection, which apply to **claims 1, 24** also apply to **claims 3, 26** and need not be reiterated.

8. With respect to magnetic resonance RF resonator **Claim 4**, and its corresponding method of making **claim 27**, **Marek** shows in figures 10a, 10b, 11, and 12 that "said inner region has a substantially oblong shape, and the magnetic field generating elements comprise electrical conductors that run substantially parallel to a major axis of the oblong shape". The same reasons for rejection, which apply to **claims 1, 24** also apply to **claims 4, 27** and need not be reiterated.

9. With respect to magnetic resonance RF resonator **Claim 5**, and its corresponding method of making **claim 28**, **Marek** shows in figures 10a, 10b, 11, and 12 that "the interdigital capacitor elements" (i.e. components 3d) "comprise electrical conductors" [See figures 5, 6, 8, and paragraphs [0082], [0069]], "that run substantially parallel to said major axis of the oblong shape". [See figures 10a, 10b, 11, and 12; and the description of components 1a-d, 2a-d, and 3a-d in the listing of reference numerals.] The same reasons for rejection, which apply to **claims 1, 4, 24, 27** also apply to **claims 5, 28** and need not be reiterated.

10. With respect to magnetic resonance RF resonator **Claim 6**, and its corresponding method of making **claim 29**, **Marek** shows in figures 10a, 10b, 11, and 12 that "the interdigital capacitor elements" (i.e. components 3d) "are located adjacent

to the shorter sides of said oblong shape." [See figures 10a, 10b, 11, and 12]. The same reasons for rejection, which that apply to **claims 1, 4, 5, 24, 27, 28** also apply to **claims 6, 29** and need not be reiterated.

11. With respect to magnetic resonance RF resonator **Claim 7**, and its corresponding method of making **claim 30**, **Marek** shows in figures 10a, 10b, 11, and 12 that "the interdigital capacitor elements" (i.e. components 3d) "comprise conducting fingers" [See paragraphs [0052], [0053], and [0099]], "separated by non-conducting gaps that also extend in a direction parallel to said major axis". [See figures 10a, 10b, 11, and 12]. The same reasons for rejection, which apply to **claims 1, 4, 24, 27** also apply to **claims 7, 30** and need not be reiterated.

12. With respect to magnetic resonance RF resonator **Claim 8**, and its corresponding method of making **claim 31**, **Marek** shows in figures 10a, 10b, 11, and 12 that "the respective lengths of the magnetic field generating elements vary relative to their distance from a center of the oblong shape". [See figures 10a, 10b, 11, and 12]. The same reasons for rejection, which apply to **claims 1, 4, 24, 27** also apply to **claims 8, 31** and need not be reiterated.

13. With respect to magnetic resonance RF resonator **Claim 9**, and its corresponding method of making **claim 32**, **Marek** shows in figures 10a, 10b, 11, and 12 that "the magnetic field generating elements further comprise lateral portions that run substantially perpendicular to said major axis, and that connect to respective interdigital capacitor elements". [See figures 10a, 10b, 11, and 12]. The same reasons for rejection, which apply to **claims 1, 4, 24, 27** also apply to **claims 9, 32** and need not be reiterated.

14. With respect to magnetic resonance RF resonator **Claim 10**, and its corresponding method of making **claim 33**, **Marek** shows in figures 10a, 10b, 11, and 12 that "together, a portion of said the conductors of the magnetic field generating elements that are located to one side of the oblong shape occupy a space having a substantially trapezoidal shape." [See figures 10a, 10b, 11, and 12]. The same reasons for rejection, which apply to **claims 1, 4, 24, 27** also apply to **claims 10, 33** and need not be reiterated.

15. With respect to magnetic resonance RF resonator **Claim 11**, and its corresponding method of making **claim 34**, **Marek** shows in figures 10a, 10b, 11, and 12 that "the interdigital capacitor elements together make up a plurality of capacitors connected in series with the magnetic field generating elements". [See figures 10a, 10b, 11, and 12]. The same reasons for rejection, which apply to **claims 1, 24** also apply to **claims 11, 34** and need not be reiterated.

16. With respect to **Claim 22**, **Marek** teaches and shows "A magnetic resonance radio frequency resonator" [See figures 10a, 10b, 11, and 12; the abstract, paragraphs [0002], [0035]] "that is located in a static magnetic field" [See paragraph [0005] in combination with paragraphs [0002], [0035], [0069] and the abstract] "and that generates a radio frequency magnetic field in an active sample volume" [See the abstract, paragraphs [0002], [0035]], "the magnetic resonance radio frequency resonator comprising: a dielectric substrate" (i.e. components 1a, 1b, 1c, and 1d of the **Marek** figures.] "and a conductive material deposited on the dielectric substrate" [See the High temperature superconductive material, of paragraphs [0002], [0005]], "and forming a plurality of nested current carrying loops" [See figures 10a, 10b, 11, 12] "each of which has magnetic field generating elements" (i.e. components 2d) "and interdigital capacitor elements" (i.e. components 3d), that are separate from the magnetic field generating elements" [See figures 10a, 10b, 11, and 12] "the current carrying loops forming a substantially closed geometric path surrounding an inner region that lies adjacent to the active sample volume" [See the combination of figures 1 through 27 which shows the numerous orientations of how the individual resonators surround the active sample volume.] "wherein substantially all of the interdigital capacitor elements are oriented in a direction substantially parallel to the orientation of the magnetic field generating elements" [See the superconductive resonant circuits 2d, 3d of the **Marek** figures. See especially figures 10a, 10b, 11, and 12 along with the abstract, and the entire reference in general as the maintained parallel orientation of the magnetic field generating elements is the main feature of novelty taught by the **Marek** reference, throughout the **Marek** reference.]

17. With respect to **Claim 23**, **Marek** teaches and shows "A resonant magnetic field coil for an NMR spectrometer" [See figures 10a, 10b, 11, and 12; the abstract, paragraphs [0002], [0035]] "that generates a radio frequency magnetic field in an active sample volume," [See the abstract, paragraphs [0002], [0035]], "the coil comprising: a planar dielectric substrate;" (i.e. components 1a, 1b, 1c, and 1d of the **Marek** figures.] "and a high-temperature superconductor material deposited on the dielectric substrate[See the High temperature superconductive material, of paragraphs [0002], [0005]] "and forming a plurality of nested current carrying loops" [See figures 10a, 10b, 11, 12] "each of which has magnetic field generating elements" (i.e. components 2d) "and interdigital capacitor elements" (i.e. components 3d), that are separate from the magnetic field generating elements" [See figures 10a, 10b, 11, and 12] "the current carrying loops forming a substantially closed geometric path surrounding an inner region that has a substantially oblong shape and lies adjacent to the active sample volume," [See the combination of figures 1 through 27 which shows the numerous orientations of how the individual resonators surround the active sample volume.] "wherein the magnetic field generating elements(i.e. components 2d) "comprise electrical conductors that run substantially parallel to a major axis of the oblong shape and the interdigital capacitor elements comprise electrical conductors that run substantially parallel to said major axis of the oblong shape", [See figures 5, 6, 8, and paragraphs [0082], [0069]], along with figures 10a, 10b, 11, and 12; and the description of components 1a-d, 2a-d, 3a-d in the listing of reference numerals.]

18. Additionally, **Marek** also shows "and wherein substantially all of the interdigital capacitor elements are located farther from a center of the oblong shape than the magnetic field generating elements. [The examiner notes that **figures 10a, and 10b** show this limitation because the term "center of the oblong shape" lacks a frame of reference, (i.e. the center of the oblong shape can be interpreted to be a) with respect to the measuring volume, or B) with the center of the oblong shape, interpreted with respect to the entire substrate. Also it is unclear whether the center of the oblong shape is to be considered with respect to the horizontal or vertical axis overall. Do to an unclear frame of reference, in **claim 23**, **Marek** does show three figures which broadly

show the limitation of "wherein substantially all of the interdigital capacitor elements are located farther from a center of the oblong shape than the magnetic field generating elements", since in figures 10a, and 10b by expanding outward from the center of the oblong shape within the rectangular area formed by the inner edges of the conductors, all of components 2d will be reached before all of components 3d are reached. [See figures 10a, and 10b]

19. **Claims 1-11,** and **22-34** are rejected under **35 U.S.C. 102(e)** as being anticipated by **Marek** US patent 6,727,700 B2 issued April 27th 2004, filed April 10th 2002, which corresponds to the **Marek** US patent application publication **2002/0190715 A1** published December 19th 2002, filed **April 10th 2002**.Because this reference is essentially equivalent and corresponding to the **Marek** US patent application publication **2002/0190715 A1** a second listing of the same citations and teachings is considered to be unnecessary and redundant.

Claim Rejections - 35 USC § 103

20. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

21. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

22. **Claims 12-21** are rejected under 35 U.S.C. 103(a) as being unpatentable over by **Marek** US patent application publication **2002/0190715 A1** published December 19th 2002, filed **April 10th 2002,** in further view of applicant's specification where the

orientation of the interdigital capacitor elements enables "the square of the peak electric field in the direction of the static magnetic field is less than 10% of the peak of the sum of the squares of the electric field components in each of the two perpendicular directions".

23. With respect to **Claim 23**, **Marek** teaches and shows "A magnetic resonance radio frequency resonator" [See figures 10a, 10b, 11, and 12; the abstract, paragraphs [0002], [0035]] "that is located in a static magnetic field" [See paragraph [0005] in combination with paragraphs [0002], [0035], [0069] and the abstract] "and that generates a radio frequency magnetic field in an active sample volume" [See the abstract, paragraphs [0002], [0035]], "the magnetic resonance radio frequency resonator comprising: a dielectric substrate" (i.e. components 1a, 1b, 1c, and 1d of the **Marek** figures.] "and a conductive material deposited on the dielectric substrate" [See the High temperature superconductive material, of paragraphs [0002], [0005]], "and forming a plurality of nested current carrying loops" [See figures 10a, 10b, 11, 12] "each of which has magnetic field generating elements" (i.e. components 2d) "and interdigital capacitor elements" (i.e. components 3d), that are separate from the magnetic field generating elements" [See figures 10a, 10b, 11, and 12] "and that generate electric field components", [See the arrows which indicate electrical current flow of figures 5, 6, 8], "the current carrying loops forming a substantially closed geometric path surrounding an inner region that lies adjacent to the active sample volume" [See the combination of figures 1 through 27 which shows the numerous orientations of how the individual resonators surround the active sample volume.]

24. **Marek** lacks an actual verbatim statement that the orientation of the interdigital capacitor elements themselves "are oriented such that 'the square of the peak electric field in the direction of the static magnetic field is less than 10% of the peak of the sum of the squares of the electric field components in each of the two perpendicular directions". However because the **Marek** superconducting resonators are designed such that 'the magnetic field produced by reach resonant circuit element on the planar substrate is parallel to the plane of the planar substrate element, on which the individual resonant circuit is located, wherein the deviation from parallelism, does not exceed 40

degrees' [See the **Marek** abstract and the various orientations of figures 1 through 27 which maintain the **Marek** reference's parallelism.] It would have been obvious to one of ordinary skill in the art at the time that the invention was made that the specifically maintained parallel orientations shown by **Marek** in figures 1, 3a, 3b, 5, 10a, 10b, 11, 12, 15, 16, 17, 18, 23, 24, 25, 26, and 27 are intrinsically "oriented such that the square of the peak electric field in the direction of the static magnetic field is less than 10% of the peak of the sum of the squares of the electric field components in each of the two perpendicular directions", because of the orientation maintained parallelism in the **Marek** reference which does not exceed 40 degrees. Additionally, the examiner notes that applicant's specification also refers to the fact that the parallel orientation of the capacitor elements enables this feature to be present. Therefore the applicant's own specification, supports the examiner's position that the configurations shown in the **Marek** reference, provide this limitation, even though a verbatim textual teaching of this property is absent in the actual **Marek** text.

25. With respect to magnetic resonance RF resonator **Claim 13**, and its corresponding method of making **claim 26**, **Marek** teaches "the conductive material is a superconductor". [See the abstract, paragraphs [0002], [0005], and [0069] as examples of this teaching.] The same reasons for rejection, obviousness, and motivation to combine, that apply to **claim 12** also apply to **claim 13** and need not be reiterated.

26. With respect to magnetic resonance RF resonator **Claim 14**, **Marek** shows in figures 10a, 10b, 11, and 12 that "said inner region has a substantially oblong shape, and the magnetic field generating elements comprise electrical conductors that run substantially parallel to a major axis of the oblong shape". The same reasons for rejection, obviousness, and motivation to combine, that apply to **claim 12,** also apply to **claim 14** and need not be reiterated.

27. With respect to magnetic resonance RF resonator **Claim 15**, **Marek** shows in figures 10a, 10b, 11, and 12 that "the interdigital capacitor elements" (i.e. components 3d) "comprise electrical conductors" [See figures 5, 6, 8, and paragraphs [0082], [0069]], "that run substantially parallel to said major axis of the oblong shape". [See figures 10a, 10b, 11, and 12; and the description of components 1a-d, 2a-d, and 3a-d in

the listing of reference numerals.] The same reasons for rejection, obviousness, and motivation to combine, that apply to **claims 12, 14,** also apply to **claim 15** and need not be reiterated.

28. With respect to magnetic resonance RF resonator **Claim 16**, **Marek** shows in figures 10a, 10b, 11, and 12 that "the interdigital capacitor elements" (i.e. components 3d) "are located adjacent to the shorter sides of said oblong shape." [See figures 10a, 10b, 11, and 12]. The same reasons for rejection, obviousness, and motivation to combine, that apply to **claims 12, 14, 15** also apply to **claim 16** and need not be reiterated.

29. With respect to magnetic resonance RF resonator **Claim 17**, **Marek** shows in figures 10a, 10b, 11, and 12 that "the interdigital capacitor elements" (i.e. components 3d) "comprise conducting fingers" [See paragraphs [0052], [0053], and [0099]], "separated by non-conducting gaps that also extend in a direction parallel to said major axis". [See figures 10a, 10b, 11, and 12]. The same reasons for rejection, obviousness, and motivation to combine, that apply to **claims 12, 14,** also apply to **claim 17** and need not be reiterated.

30. With respect to magnetic resonance RF resonator **Claim 18**, **Marek** shows in figures 10a, 10b, 11, and 12 that "the respective lengths of the magnetic field generating elements vary relative to their distance from a center of the oblong shape". [See figures 10a, 10b, 11, and 12]. The same reasons for rejection, obviousness, and motivation to combine, that apply to **claims 12, and 14** also apply to **claim 18** and need not be reiterated.

31. With respect to magnetic resonance RF resonator **Claim 19**, and its corresponding method of making **claim 32**, **Marek** shows in figures 10a, 10b, 11, and 12 that "the magnetic field generating elements further comprise lateral portions that run substantially perpendicular to said major axis, and that connect to respective interdigital capacitor elements". [See figures 10a, 10b, 11, and 12]. The same reasons for rejection, obviousness, and motivation to combine, that apply to **claims 12, 14** also apply to **claim 19** and need not be reiterated.

32. With respect to magnetic resonance RF resonator **Claim 20**, **Marek** shows in figures 10a, 10b, 11, and 12 that "together, a portion of said the conductors of the magnetic field generating elements that are located to one side of the oblong shape occupy a space having a substantially trapezoidal shape." [See figures 10a, 10b, 11, and 12]. The same reasons for rejection, obviousness, and motivation to combine that apply to **claims 12 14** also apply to **claim 20** and need not be reiterated.

33. With respect to magnetic resonance RF resonator **Claim 11**, and its corresponding method of making **claim 34**, **Marek** shows in figures 10a, 10b, 11, and 12 that "the interdigital capacitor elements together make up a plurality of capacitors connected in series with the magnetic field generating elements". [See figures 10a, 10b, 11, and 12]. The same reasons for rejection, which apply to **claims 1, 24** also apply to **claims 11, 34** and need not be reiterated.

34. **Claims 12-21** are rejected under **35 U.S.C. 103(a)** as being unpatentable over by **Marek** US patent **6,727,700 B2** issued April 27th 2004, filed April 10th 2002, which corresponds to the **Marek** US patent application publication **2002/0190715 A1** published December 19th 2002, filed **April 10th 2002,** in further view of applicant's specification where the orientation of the interdigital capacitor elements enables "the square of the peak electric field in the direction of the static magnetic field is less than 10% of the peak of the sum of the squares of the electric field components in each of the two perpendicular directions". Because this reference is essentially equivalent and corresponding to the **Marek** US patent application publication **2002/0190715 A1** a second listing of the same citations and teachings is considered to be unnecessary and redundant.

Conclusion

35. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tiffany Fetzner whose telephone number is: (571) 272-2241. The examiner can normally be reached on Monday-Thursday from 7:00am to 4:30pm., and on alternate Friday's from 7:00am to 3:30pm.

36. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez, can be reached at (571) 272-2245. The **only official fax**

phone number for the organization where this application or proceeding is assigned is **(571) 273-8300**.

37. Information regarding the status of an application may be obtained from the Patent Application information Retrieval (PAIR) system Status information for published applications may be obtained from either Private PMR or Public PMR. Status information for unpublished applications is available through Private PMR only. For more information about the PMR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PMR system contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TAF
January 3, 2007
Technology Center 2800

1/3/07

BRIJ SHRIVASTAV
PRIMARY EXAMINER